

REMARKSStatus of the Claims:

Claims 1-68 were originally filed with the patent application. Claims 56-58 and 60-68 were canceled in the 2/11/03 Amendment and Response. Claims 14, 21, 24, 25, 27-31, and 46-52 have been withdrawn from consideration. No claims have been canceled or added by this Amendment and Response.

Independent Claim Rejections:

Pending independent Claims 1, 32, 33, 45, 53, and 59 are each directed a method for making a disk drive having a first disk and a first head. Each claim includes the steps of positioning a push-pin assembly of a servo writer relative to the disk drive, moving the push-pin assembly of the servo writer relative to the first disk of the disk drive, and moving the first head of the disk drive relative to the first disk of the disk drive during movement of the push-pin assembly of the servo writer, where a servo writing operation includes at least these three steps. Each of these independent claims then further specifies various details regarding the associated push-pin assembly.

The amendment of the various independent claims re-emphasizes the limitations that previously existed in such claims – principally re-emphasizing what components are part of the disk drive and what components are part of the servo writer. The servo writer and the disk drive are two different structures – the servo writer is not part of the disk drive. No new issues are raised by the amendments provided herein.

Independent Claims 1, 32, 33, 45, 53, and 59 stand rejected under 35 U.S.C. §103(a) based upon U.S. Patent No. 5,727,882 to Butler et al. (hereafter '882 Patent). Applicant respectfully

requests reconsideration as the '882 Patent does not suggest the combination of features presented in any of these independent claims.

Each of the pending independent claims is directed to performing a servo writing operation on a disk drive using a push-pin assembly of a servo writer, the structure of each such push-pin assembly being specified in each of these claims. The Examiner takes the position in Paragraph 2 of the outstanding Office Action that the '882 Patent discloses a push-pin assembly 408 in Figures 4-5. Reference numeral 408 is identified in the '882 Patent as being a head stack assembly of a disk drive 10 that includes a plurality of actuator arms (column 4, lines 21-25). Therefore, reference numeral 408 is part of the disk drive - not part of a servo writer. The push-pin assembly of the pending claims is part of the servo writer. Applicant notes that the independent claims as originally filed referenced that a contact head of the push-pin assembly was engageable with a disk drive actuator arm assembly.

The Examiner also takes the position in Paragraph 2 of the Office Action that the '882 Patent discloses a push-pin assembly 504 in Figures 4-5. Reference numeral 504 is identified in the '882 Patent as being a pivot bearing assembly (column 4, lines 16-17). Column 4, lines 21-30 of the '882 Patent indicates that a disk drive 10 includes a head stack assembly 408 as noted above, as well as a pivot bearing assembly 414 that is fitted into a bore 412 in the head stack assembly 408. The pivot bearing assembly 414 supports the head stack assembly 408 and allows the same to move relative to the base 401 of the drive 10. Therefore, reference numeral 504 is part of the disk drive - not part of a servo writer. The push-pin assembly of the pending claims is part of the servo writer.

Based upon the foregoing, the portions of the '882 Patent cited by the Examiner simply do not disclose a single configuration of a servo writer push-pin. The word "servo" could not even be found in the '882 Patent. In any case and in the event that the Examiner is taking the position that it would

be obvious to use a disk drive pivot bearing assembly of a disk drive as a push-pin for a servo writer, Applicant respectfully disagrees. Applicant readily admits that servo writing operations in general are well known in the art. It is the understanding of the undersigned that all disk drives undergo a servo writing operation before they can be used in normal disk drive operations (e.g., before a disk drive can be used in a desktop or laptop computer for running a software application). What is not known is to use the various push-pin assembly configurations specified by the pending claims on a servo writer for performing servo writing operations.

The mere fact that servo writing operations in general are known, that it is known that servo writers may use a push-pin to interface with an actuator arm assembly for servo writing operations, and that it is known to interconnect a disk drive head stack assembly with a base plate using a pivot bearing to allow the head stack assembly to move relative to the disk(s) of the disk drive by no means renders any of the pending independent claims obvious to one skilled in the art. The function of a pivot bearing for a disk drive is to interconnect a head stack assembly with the disk drive housing (e.g., a base plate) in a manner that allows the head stack assembly to move relative to each disk used by the disk drive for normal disk drive operations. That is, the head stack assembly moves about the pivot bearing to change the position of each head of the head stack assembly relative to its corresponding disk. This is generally discussed at column 1, lines 12-24 of the '882 Patent. A push-pin or a push-pin assembly of a servo writer is not part of the disk drive as noted above. Generally, a servo writer is a piece of equipment that acts on the disk drive to perform a servo writing operation on one or more of its disks. The servo writer push-pin is that structure of the servo writer that physically engages typically a single actuator arm of an actuator arm assembly or head stack assembly (e.g., at a location that is spaced from the axis about which the head stack assembly moves — namely the above-noted pivot bearing) for controlling the position of the actuator arm assembly

relative to the disk(s) used by the drive during a servo writing operation. These significantly different functions of a pivot bearing and a push-pin provide no motivation for one skilled in the art to modify the teachings of the '882 Patent in any manner that yields the invention of any of the pending claims.

Further grounds support Applicant's position that there is no motivation for one skilled in the art to modify the teachings of the '882 Patent in any manner that yields Applicant's invention of any pending independent claim. The Examiner has not identified a single instance where there is a teaching or suggestion in the art that pivot bearings are appropriate for use as a push-pin for a servo writer, where this pivot bearing rotatably interconnects a disk drive head stack assembly and a disk drive base plate. Further in this regard, Applicant does not even admit that the pivot bearing configuration disclosed by the '882 Patent is even structurally similar to any of the push-pin assemblies set forth in any of the pending independent claims.

The Examiner refers Applicant to column 1, lines 12-21 of the '822 Patent, and takes the position that here there is a teaching in the '882 Patent of a servo writing operation. This is simply not the case. Instead, this portion of the disclosure of the '882 Patent is directed to how to rotatably interconnect the head stack assembly with the disk drive housing. A disk drive voice coil motor or the like is used to move the head stack assembly about the pivot bearing during normal disk drive operations or while "using the computer" that incorporates the disk drive. The head stack assembly may also be moved about this same pivot bearing during a servo writing operation. However, a servo writing operation is not the same as the operation of the disk drive when incorporated into a computer for using in running one or more applications. Instead, a servo writing operation is part of the manufacture of the disk drive. That is, a servo writing operation prepares one or more disks of the disk drive such that the same may be used in a computer by a consumer for running a desired

software application or the like. Specifically, the servo writing operation writes information onto the disk(s) of the drive – information that is used to be able to position the read/write head(s) at the desired/required location relative to the corresponding data storage disk after the completion of the manufacture of the disk drive and when the same is incorporated into a computer for running a desired application. The servo writing operation set forth in the pending independent claims each use a particular configuration of a push-pin assembly.

Based upon the foregoing, all pending independent claims, as well as their corresponding dependent claims, are allowable over the '882 Patent. There is therefore no need to separately address the patentability of each of these claims and/or the Examiner's interpretation in relation to any of these claims or any of the references of record in relation thereto.

Conclusion:

Based upon the foregoing, Applicant believes that all pending claims are in condition for allowance and such a disposition is respectfully requested. In the event that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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